

Work Order ID 155208

Tuesday, January 10, 2017 4:26:16 PM

155208

PMA

Page 1

Item ID: D206-642-561PHI**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag Float Compatible**Start Date:** 1/11/2017 **Start Qty:** 1.00***1*****Cust Item ID:****Required Date:** 2/8/2017 **Req'd Qty:** 1.00***1*****Customer:****Reference:****Approvals:****Process Plan:****Date:**

JAN 10 2017

Tooling:**Date:****Run Start*****NR1*****QC:****Date:****SPC (Y/N):****Date:****Stop*****NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3274-045	G								
DSI 9749	A								
100	Document Control	0.00							
100									
DC	Memo	0.00							
Doc.Control -USB or Paperwork Photocopy bluefile and create labels per PPP D206-642-561 CHG001									

DAS
21
9-89

FEB 13 2017

N/A

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Skidtubes	0.00							
110									
Skidtubes	Memo	0.13							
Skidtubes	****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****								
	1- remove fwd indexing ridge as per dwg D3274. Prepare for welding								
	2- weld fwd cap as per dwg D3274 and OSI004 AR Aluminum Rod Batch: <u>M136562/M13658</u>								
	3- grind fwd cap weld on top surface only								
	4- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.								
	5-Drill Aft cap pilot hole using DT8025								
	6 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D and DT8742. Drill 3/16" pilot holes as per Dwg D3274								
	7 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #								
	8 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.								

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Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** ***NR1***
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** ***NR2***

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114 *114* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				(			DAS 38 9-89 JAN 24 2017
116 *116* QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00				(			DAS 38 9-89 JAN 24 2017
120 *120* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.07				1	2	17-01-25	DI.

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QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
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Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																												
Large Fab ☐	Composite ☐	Supplier ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By																																																							
								Lead hand / Supervisor Approval Verification																																																							
								QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
OTHER :																																																															

Work Order ID 155208

Tuesday, January 10, 2017 4:26:16 PM

155208

Page 4

Item ID: D206-642-561PHI**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Item Name:** Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag Float Compatible**Stop*****NS2*****Start Date:** 1/11/2017 **Start Qty:** 1.00 ***1*****Cust Item ID:****Required Date:** 2/8/2017 **Req'd Qty:** 1.00 ***1*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start*****NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop*****NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Down Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC7-Inspect Chemical Conversion Coat Memo	0.00 0.00							
150 *150* Skidtubes Skidtubes Skidtubes	Skidtubes Memo 1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274 2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube 3-Bond web in place as per Dwg D3274 & QSI 015. A/RSikaflex-291 <u>136652</u> Sikaflex expire date: <u>17-12-7</u> Start: <u>17-1-25</u> Time: <u>11:30AM</u> Finish: _____ Time: _____ (Adhere for 12 hours)	0.00 0.14							

DAS
03
9-89

17-1-25

17-1-25

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 																		
Description Work Order Deviation				Disposition																					
							Completed By																		
							Lead hand / Supervisor Approval Verification																		
							QC / QA Coordinator Approval																		

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Temperature/Cure ☐		Power Loss/Surge ☐	
Design ☐		Operator ☐		Set-up ☐		Folio/Program ☐	
Doc/Data ☐		Offset/Setup ☐		BOM/Route ☐		Grain ☐	
Equip/Tooling ☐		Supplier ☐		Broken/Damage/Defect ☐		Weld ☐	
Handling/Pre ☐		Training ☐		Inspection Incomplete/Unqualified ☐		Wrong Stock Pulled ☐	
Material ☐		Use for Testing ☐		Contamination ☐		Out of Sequence ☐	
Internal Transport ☐		Poor Information ☐		Countersink ☐		Off-set ☐	
Tribal Knowledge ☐		Rushing ☐		Cut Too Short ☐		Mislabeled ☐	
LOA ☐		Product Improvement ☐		Instructions Incomplete/Unclear ☐		Fit/Function ☐	
Substation ☐		Process Improvement ☐		Drill Holes ☐		Misaligned/off center ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

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155208

Page 5

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Replacement Skidtube,High Gear, Standard Wearplates, DART (Apical) Tri-Bag Float Compatible

Stop *NS2*

Start Date: 1/11/2017 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 2/8/2017 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

Run Start *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Stop ***NR2***

Sequence ID/
Work Center ID
160

Operation	
Description	QC5- Inspect part completeness to step on W/O

**Set Up/
Dues House**
0.00

Tool ID	Tool #	Plan Code
---------	--------	-----------

Accept
Qty

Reject
Qty

Reject Number

Insp.
Stemp

DAS
18
9-99

160

OC

Memo

0.00

Quality Control

170

0.01

170

Skidtubes

Skidtubes

Skidtubes

Memo

0.12

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES ***ONLY FOR WEARPADS*** USING D3274-1T2
RED SECTIONS,** SEE PAGE 4**
OPEN HOLES TO .297" . Deburr

3- Countersink crossbolt spacer holes as per Dwg D3274

4- Prepare for welding

17-126

2 > DP 17-1-30

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

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Page 6

side. Use
BE 17-01-31
17-2-1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
		OTHER : ☐			

155208

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N900040100

Stop *NS2*

Stop *NS2*

Run Start *NR1*

Stop *NR2*

Stop *NR2*

DAS
38
~~9-80~~

1

38
9-00
FEB 02 2017

FEB 02 2017

Re-alodine tube as per QSI 005 section 4.1.2.1 **Do not acid etch**

XI



2017/02/02
BER.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

155208

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N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Cust Item ID:

Customer:

Run Start *NR1*

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

230

SprayPaint

Spray Painting

Operation Description

**Set Up/
Due Hours**
0.00

0.22

Memo

Make sure Nut Plate Thread is protected using paint screw,.

1- PRIME INSIDE AND OUT AS PER DWG AND QSI 005 4.2.1.3.3
PRIMER PRC DESOTO 515X349 BATCH: 136429

2- PAINT BLACK AS PER DWG AND QSI 005 4.2.2 USING CA8213/F3738
CAMOFLAGE BLACK
PAINT BATCH: 135519

240

QC14- Inspect Spray Paint

0.00

240

QC

Quality Control

Memo

0.00

**DAS
15
9-89**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		☐ OTHER : _____							

Work Order ID 155208

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155208

Page 9

Item ID: D206-642-561PHI **Accept** ***N900040100*** **Setup** **Start** ***NS1***
Revision ID:
Item Name: Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag Float **Stop** ***NS2***
Start Date: 1/11/2017 **Start Qty:** 1.00 ***1*** **Cust Item ID:**
Required Date: 2/8/2017 **Req'd Qty:** 1.00 ***1*** **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run** **Start** ***NR1***
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Down Time	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
244 *244* HandFinish Hand Finishing	Wing Walk as per dwg QSI005 4.4 Batch <u>M1136705</u> Memo APPLY WING WALK WHERE INDICATED ON SHEET 4, AND ALSO FRONT CAP	0.00 0.07				<u>1</u>	<u>6</u>	<u>12/07/09</u>	
246 *246* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				<u>1</u>			DAS 38 9-89 FEB 10 2017
250 *250* HandFinish Hand Finishing	HandFinishing Memo 1-Install Nut Plate as per Dwg D3274. Apply LPS-PROCYON to Nut Plate and rivets. A/RN/ALPS-PROCYON <u>M1133690</u> 2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a A/RSikaflex-291 <u>M1136595</u> Sikaflex expire date: <u>12/10/09</u>	0.00 0.15				<u>1</u>	<u>4</u>	<u>12/10/09</u>	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified ☐	☐	Past Due	☐				

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Accept

Setup

Start

NS1

Item Name: Replacement Skidtube,High Gear, Standard Wearplates, DART (Apical) Tri-Bag Float Compatible

Stop

NS2

Start Date: 1/11/2017 **Start Qty:** 1.00

1

Cust Item ID:

Required Date: 2/8/2017 **Req'd Qty:** 1.00

1

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run

Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/
Work Center ID
260

Operation

Description

QC5- Inspect part completeness to step on W/O

Set Up/

Don't Have

0.00

Tool ID**Tool #**

Plan

Accept

Reject

Reject

Insp.

Stomach

260

QC

Memo

0.00

Quality Control

Inspect Nut Plate & Inserts

16 17-02-8. DAS 34 200

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By																																																							
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Root Cause		FAULT CATEGORY																																																													
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
OTHER : _____																																																															

155208

Tuesday, January 10, 2017 4:26:16 PM

N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

1

1

Run Start *NR1*

Stop *NR2*

Stop *NR2*

Insp.
Stamp

1. of all 17/02/00

1- Apply coat of rockguard to skidtube where wearpads are installed as per note 14 and sheet 4.

*****LET CURE BEFORE INTALLING WEARPADS*****

Rockguard batch: M135064

2-Install wearpads as per Dwg D3274.

3-Inspect for foreign objects as per QSI 024

4-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/RSikaflex-291 11136595
Sikaflex expire date: 17109

5- Fill gap with sikaflex as per dwg sheet 6, Detail L

A/RSikaflex-291 1413659-
Sikaflex expire date: 17/10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			

Root Cause		FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Work Order ID 155208

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155208

Page 12

Item ID: D206-642-561PHI**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Item Name:** Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag Float Compatible**Stop*****NS2*****Start Date:** 1/11/2017 **Start Qty:** 1.00***1*****Cust Item ID:****Required Date:** 2/8/2017 **Req'd Qty:** 1.00***1*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start*****NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop*****NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC5- Inspect part completeness to step on W/O	0.00							
280									
QC	Memo	0.00				1			DAS 38 9-89
Quality Control									FEB 10 2017
290		0.00							
290									
Packaging	Memo	0.00							DAS 27 9-89
Packaging	Identify and pack for shipping as per PPP D206-642-561 Location: _____ PPP Rev: _____								FEB 10 2017
300	QC21- Final Inspection - Work Order Release	0.00							
300									
QC	Memo	0.02							DAS 21 9-89
Quality Control									FEB 13 2017

DAS
21
9-89

FEB 10 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

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Page 1
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Work Order ID: 155208

155208

Parent Item: D206-642-561PHI

D206-642-561PHI

Parent Item Name: Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag
Float Compatible

Start Date: 1/11/2017

Required Date: 2/8/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV REV:A 16.07.19 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3537-11		Manufactured	No				Each	13.0000		1			
D3537-11									**			17/02/09	
Wearpad													

Location	Loc Qty	Loc Code
FP001	12	
145184	12	
prelim	1	
137963	1	

D3274-041BENT		Manufactured	No				Each	7.0000		1			
D3274-041BENT									**			17-1-19	
Skidtube Assembly 206													

Location	Loc Qty	Loc Code
LG002	7	
150249	7	
	Each	
	11.0000	

D2646PHI		Manufactured	No				Each	11.0000		1			
D2646PHI									**			17/02/09	
Aft Cap													

Location	Loc Qty	Loc Code
FP001	11	
149817	11	
	Each	
	173.0000	

D2649		Manufactured	No				Each	173.0000		12			
D2649									**			17/01/30	
Cross Bolt Spacer													

Location	Loc Qty	Loc Code
LG001	173	
146930	48	
149833	20	
153814	105	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

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Page 2

Work Order ID: 155208

155208

Parent Item: D206-642-561PHI

D206-642-561PHI

Parent Item Name: Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag
Float Compatible

Start Date: 1/11/2017

Required Date: 2/8/2017

D3275-1

Manufactured No

Each

70.0000

12

D3275-1

Cross Bolt Spacer

Start Qty: 1.00

Required Qty: 1.00

**

8617-01-30

Location

Loc Qty

Loc Code

LG001

70

146967

23

147604

1

154093

46

D3282-041

Manufactured No

Each

0.0000

D3282-041

Float Web (206L/407)

D3285-1

Manufactured No

Each

8.0000

D3285-1

Cap

**

17-1-25

Location

Loc Qty

Loc Code

LG001

8

126290

2

153501

6

D3415-041PHI

Manufactured No

Each

6.0000

D3415-041PHI

Nut Plate

**

all 12/02/08

Location

Loc Qty

Loc Code

FP001

6

147137

6

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Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

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Work Order ID: 155208

155208

Parent Item: D206-642-561PHI

D206-642-561PHI

Parent Item Name: Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag
Float Compatible

Start Date: 1/11/2017

Required Date: 2/8/2017

D3537-9

Manufactured No

Each

35.0000

Start Qty: 1.00

9

Required Qty: 1.00

D3537-9

Wearpad

**

all 1/10/2017

Location

Loc Qty

Loc Code

FP001

34

B155312

x6

145183

34

x3

prelim

1

137962

1

D3672-1

Manufactured No

Each

818.0000

2

D3672-1

Washer, Phenolic

**

all 1/10/2017

Location

Loc Qty

Loc Code

FG

10

85222

10

FP001

746

112218

4

134785

242

150074

500

ST049

62

147077

62

ALS4-1032-130

AELS4-1032-130 Purchased

No

Each

1,692.000

40

ALS4-1032-130

Rivnut

**

all 1/10/2017

Location

Loc Qty

Loc Code

FG

50

FG

M135442

50

FP001

1642

M133077

72

M135442

1570

x40

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Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Picklist Print

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Page 4

Work Order ID: 155208

155208

Parent Item: D206-642-561PHI

D206-642-561PHI

Parent Item Name: Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag
Float Compatible

Start Date: 1/11/2017

Required Date: 2/8/2017

AN3C4A

Purchased

No

Each

Start Qty: 1.00
1,748.000

Required Qty: 1.00
42

AN3C4A

Bolt

del 17/02/09

Location	Loc Qty	Loc Code
FG	20	
122814	20	
FP001	1044	
M133440	7	
M134396	41	
M134509	6	
M134606	29	
M134676	44	
M134762	106	
M134861	13	
M135058	123	
M135127	22	
M135297	52	
M135442	2	
M135774	53	
M135864	64	
M135948	17	
M136295	465	
OVER002	500	
<u>M136450</u>	500	<i>x42</i>
ST350	184	
M135704	184	

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval 	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Work Order ID: 155208

155208

Parent Item: D206-642-561PHI

D206-642-561PHI

Parent Item Name: Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag
Float Compatible

Start Date: 1/11/2017

Required Date: 2/8/2017

NAS1149C0463R

Purchased

No

Each

Start Qty: 1.00
375.0000

1

Required Qty: 1.00

NAS1149C0463R

Washer

ll 17/02/08

Location

Loc Qty

Loc Code

FP001

36

m127306

36

x1

ST266

339

m134167

139

m136263

200

NAS1149C0332R

Purchased

No

Each

4,607.000

42

NAS1149C0332R

WASHER

ll 17/02/08

Location

Loc Qty

Loc Code

FP001

1288

m136301

1288

GA

44

m133284

44

ST260a

2500

m135408

0

m135766

500

m135908

200

m136042

500

m136444

500

m136537

800

x42

ST266

775

m135408

9

m135466

766

Tuesday, January 10, 2017 4:26:23 PM

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Page 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐				

Picklist Print

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Page 6

Work Order ID: 155208

155208

Parent Item: D206-642-561PHI

D206-642-561PHI

Parent Item Name: Replacement Skidtube, High Gear, Standard Wearplates, DART (Apical) Tri-Bag
Float Compatible

Start Date: 1/11/2017

Required Date: 2/8/2017

CCR264SS3-3 CCR264SS-3-03 Purchased No

Each 95.0000

Start Qty: 1.00 Required Qty: 1.00

2

CCR264SS3-3

Cherry Rivet

**

all 17/02/08

Location

Loc Qty

Loc Code

FP001

95

m128818

95

Each

174.0000

2

CR3212-4-03

Purchased

No

CR3212-4-03

Cherry Rivet

**

all 17/02/08

Location

Loc Qty

Loc Code

FP001

95

m134943

95

ST320

79

119017

79

Each

35.0000

1

MS27039C4-06

Purchased

No

MS27039C4-06

SCREW

**

all 17/02/08

Location

Loc Qty

Loc Code

ST276

35

m134889

35

Tuesday, January 10, 2017 4:26:23 PM

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Page 6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
☐ OTHER : _____					

Qty -041	Qty -043	Qty -045	Part Number	Description
X			D3274-041	SKIDTUBE ASSEMBLY
	X		D3274-043	SKIDTUBE ASSEMBLY
		X	D3274-045	SKIDTUBE ASSEMBLY (FOR PHI)
1	1	1	D2600-1-240	EXTRUSION
1	1	1	D2646	AFT CAP
12	12	12	D2649	CROSS BOLT SPACER
12	37	12	D3275-1	CROSS BOLT SPACER
1	1	1	D3282-041	FLOAT WEB
1	1	1	D3285-1	CAP
1	1	1	D3413-1	RING
1	1	1	D3415-041	NUT PLATE
9	9		D3537-1	WEARPAD
		1	D3537-11	WEARPAD
1	1		D3537-3	WEARPAD
		9	D3537-9	WEARPAD
2	2	2	D3672-1	WASHER
1	1		D4956-15	WEARSHOE
1	1		D4956-23	WEARSHOE
1	1		D4956-35	WEARSHOE
1	1		D4956-39	WEARSHOE
78	78	40	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	42	AN3C4A	BOLT
1	1		AN4C5A	BOLT
1	1	1	NAS1149C0463R	WASHER (AN960C416)
80	80	42	NAS1149C0332R	WASHER (AN960C10L)
2	2	2	CCR264SS3-3	RIVET
2	2	2	CR3212-4-03	RIVET
		1	MS27039C4-06	SCREW

GENERAL NOTES:

1. MATERIAL: N/A
2. FINISH:

ON -041/-043: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D3282-041 WEB PRIME (REF. 4.2.1.3.3) OUTSIDE ONLY AND PAINT WHITE PER DART QSI 005 4.2 BLACK ANTI-SKID PAINT AS INDICATED TO 0.5" ABOVE LOCATION RIDGE PER DART QSI 005 4.4

ON -045: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D3282-041 WEB PRIME (REF. 4.2.1.3.3) INSIDE AND OUTSIDE PER QSI 005 4.2.1 PAINT BLACK PER QSI 005 4.2.2 USING CA8213F37036 CAMOFLAGE BLACK PER MIL-PRF-06285E TYPE I CLASS H. BLACK ANTI-SKID PAINT AS INDICATED TO 0.5" ABOVE LOCATION RIDGE PER DART QSI 005 4.4

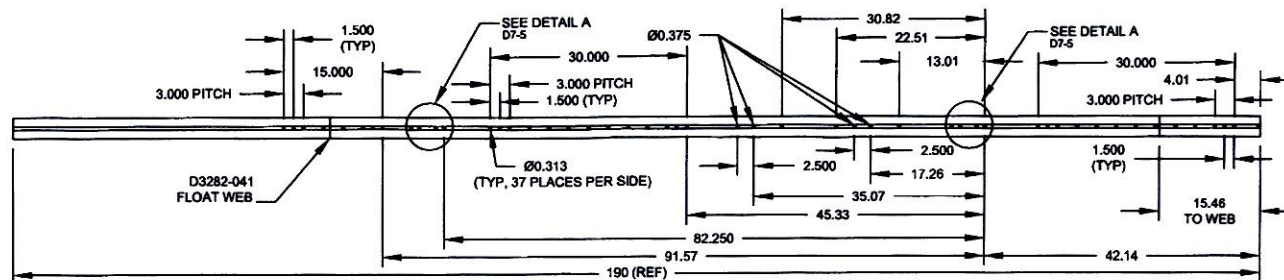
3. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
4. UNITS: INCHES UNLESS OTHERWISE NOTED
5. BREAK SHARP EDGES 0.005 TO 0.010 MAX
6. IDENTIFICATION: N/A
7. WEIGHT: FOR -041/-043 = 37.5 LBS
FOR -045 = 33.4 LBS
8. WELDING TO BE DONE PER DART QSI 004.
9. ALL HOLES DRILLED ON CENTERLINES.
10. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020" DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
11. BOND D3282-041 FLOAT WEB INTO D3274-1/3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
12. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX-241/291. ON -045, DO NOT DRILL HOLES OR INSTALL INSERTS FOR LONG WEARPLATES.
13. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS GREASE WITH WASH 'N WIPE DEGREASER.
14. ON -045, APPLY COAT OF ROCKGUARD TO SKIDTUBE WHERE WEARPADS ARE INSTALLED.

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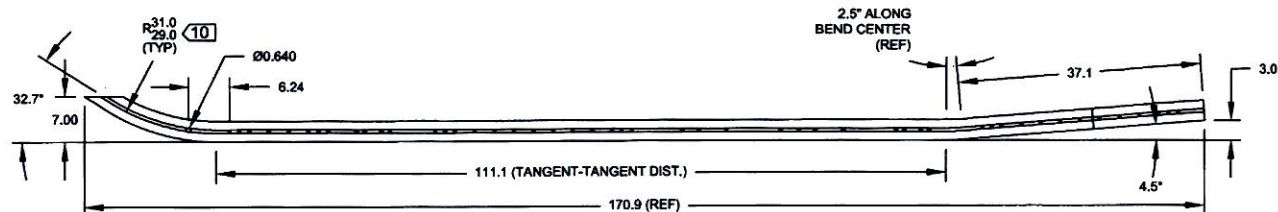
JAN 10 2017

G	ADD -045 CONFIGURATION (FOR PHI) ZN A5-4, A5-6 REVISE NOTE 2, 7 & 12, ADD NOTE 14 (ZN A8-1)	DS	16.04.25
F	REVISE NOTE 2: ADD ANTI-SKID PAINT, REMOVE GASKETS PER IIN-D206-642 REV Q	DB	14.04.15
E	REVISE NOTE 2: FINISH NOW PRIME/PAINT WAS POWDERCOAT, REF. PAR13-256	DW	13.05.17
D	NEW INSERTS, SS WEARSHOE + GASKET	CP	06.12.19
C	ADD -043; NEW INSERTS	CP	05.03.16
B	MOVE SADDLE HOLE: 42.14 WAS 42.76	CP	04.08.09
A	NEW ISSUE	CP	04.03.15
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE USA, INC EUGENE, OR	
DRAWN	RF		
CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	JLM	D3274	SHEET 1 OF 6
APPROVED	DS	TITLE	SCALE
DE APPR.	+	SKIDTUBE ASSEMBLY	NTS
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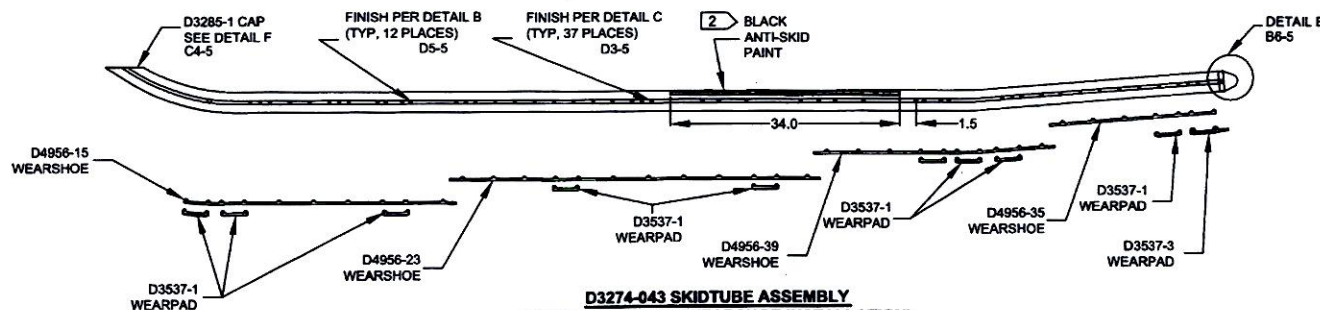
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ECN 16-616



D3274-043 DRILLING/ASSEMBLY DETAIL



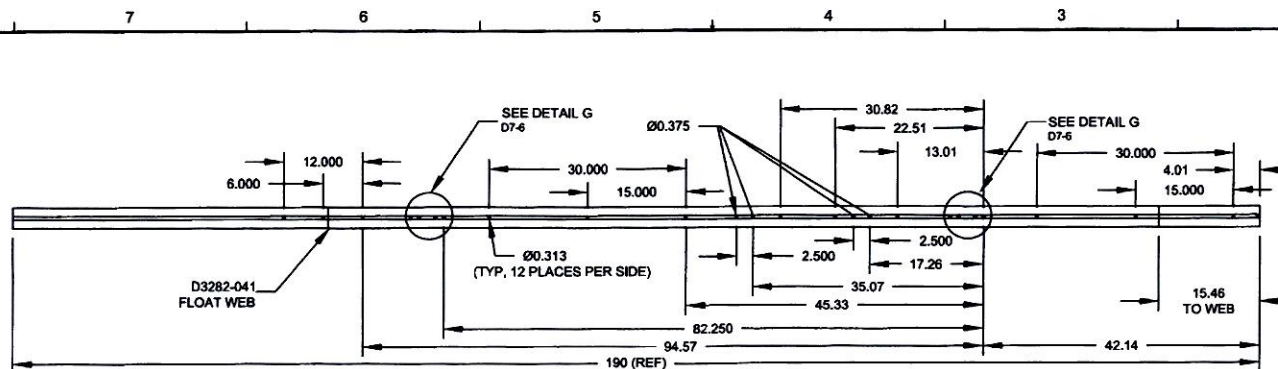
D3274-043 BEND/DRILLING DETAIL



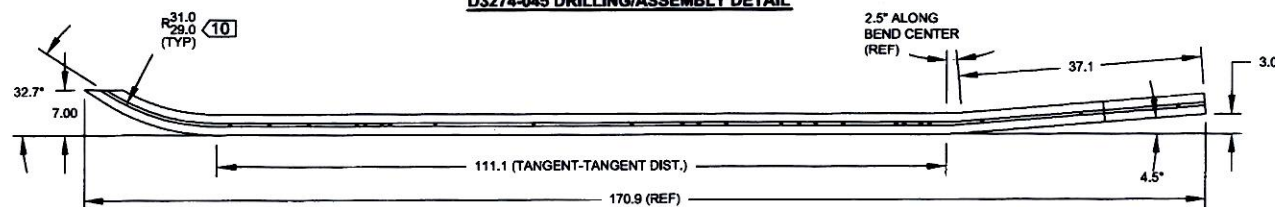
**D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)**

RELEASE
2016-07-26

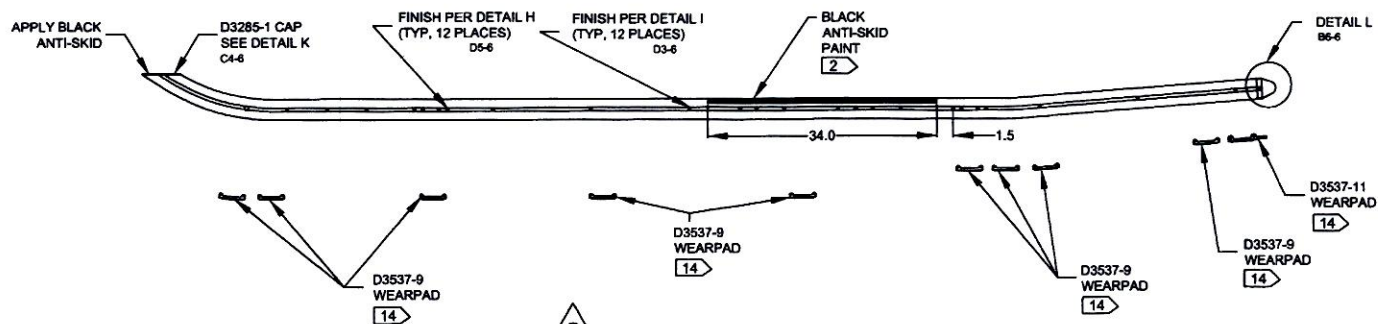
DESIGN	CP	DART AEROSPACE USA, INC	
DRAWN	RF	EUGENE, OR	
CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	JLM	D3274	SHEET 3 OF 6
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DE APPR.	AK	SKIDTUBE ASSEMBLY	NTS
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D3274-045 DRILLING/ASSEMBLY DETAIL



D3274-045 BEND/DRILLING DETAIL

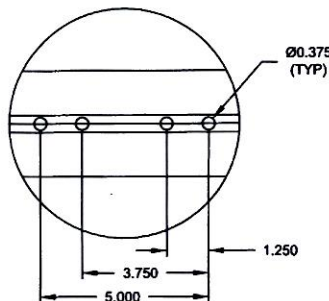


D3274-045 SKIDTUBE ASSEMBLY
(SEE DETAIL J FOR WEARSHOE INSTALLATION)

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MFG. APPR.	JLM	D3274	SHEET 4 OF 6
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DE APPR.		SKIDTUBE ASSEMBLY	NTS
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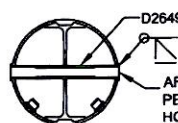
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DETAIL A: DRILL DETAIL
D6-2, D3-2, D5-3, D3-3



DETAIL B
B6-2, B5-3

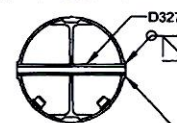
FOR Ø0.375 HOLES ONLY



- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE TO Ø0.313x0.75 DEEP

DETAIL C
B5-2, B4-3

FOR Ø0.313 HOLES ONLY



CHAMFER 0.030x45°
(TYP)

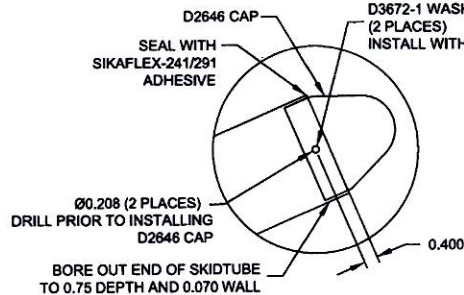
DETAIL D
A4-2, A4-3



- ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
NAS1149C0332R WASHER (1)
(78 PLACES)

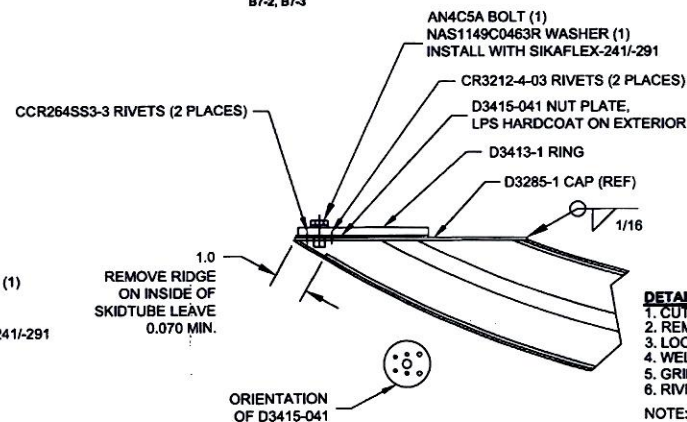
WEARSHOEWEARPAD (REF)

DETAIL E
B2-2, B2-3



- AN3C4A BOLT (1)
NAS1149C0332R WASHER (1)
D3672-1 WASHER (1)
(2 PLACES)
INSTALL WITH SIKAFLEX-241/291

DETAIL F: END FINISHING DETAIL
B7-2, B7-3



DETAIL F NOTES

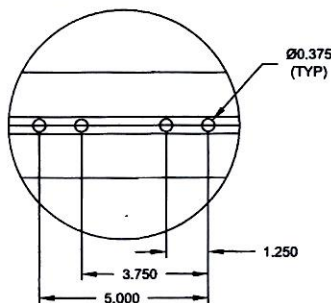
1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

-041/-043 DETAILS

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2016-07-26

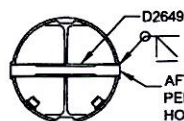
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CHECKED	AK	DRAWING NO.	REV. G
MFG. APPR.	JLM	D3274	SHEET 5 OF 6
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DE APPR.		SKIDTUBE ASSEMBLY	NTS
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DETAIL G: DRILL DETAIL
D6-4, D3-4



DETAIL H
B6-4

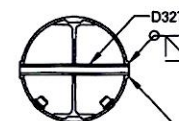
FOR Ø0.375 HOLES ONLY



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
2. INSERT D2649 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE TO Ø0.313x0.75 DEEP

DETAIL I
B5-4

FOR Ø0.313 HOLES ONLY



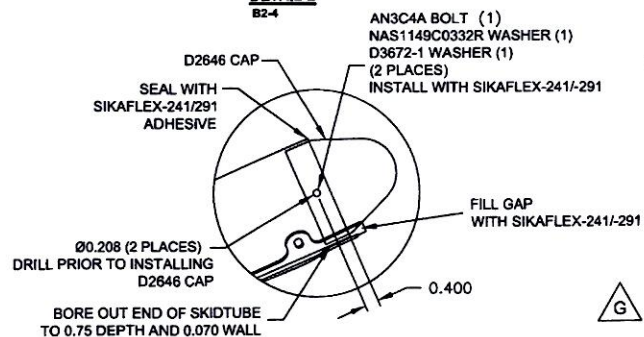
CHAMFER 0.030x45°
(TYP)

DETAIL J
A4-4

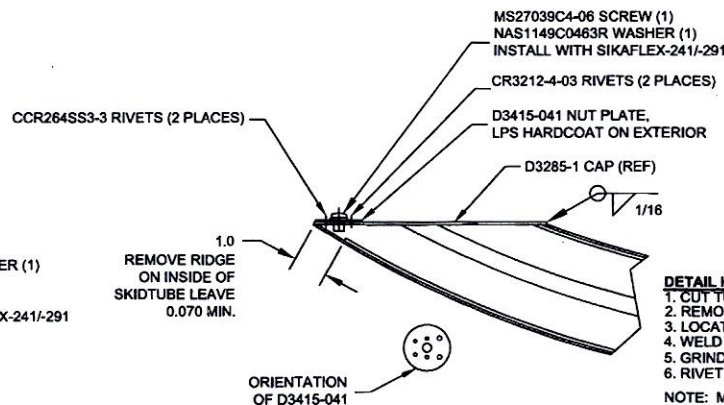


ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
NAS1149C0332R WASHER (1)
(40 PLACES)
WEARPAD (REF)

DETAIL L
B2-4



DETAIL K: END FINISHING DETAIL
B7-4



DETAIL K NOTES

1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH



-045 DETAILS

RELEASED
2016-07-26

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MFG. APPR.	JLM	D3274	SHEET 6 OF 6
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DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-642 REV. Q AND INSTRUCTIONS FOR CONTINUED
AIRWORTHINESS ICA-D206-642 REV. 6 OR LATER APPROVED REVISION

REF. FAA STC: SA00475SE
REF. TCCA STC: SH98-4
REF. EASA STC: EASA.IM.R.S.01320

PURPOSE:

TO ADD D206-642-521/-522 SKIDTUBE INSTALLATIONS WITH WEARPADS ONLY AS
PREFERRED BY SOME CUSTOMERS.

PARTS LIST:

PARTS LIST OF SECTION 4.7 OF IIN-D206-642 REV. Q AND SECTION 32.17 OF ICA-D206-642
REV. 6 IS AMENDED AS SHOWN BELOW TO REFLECT THE ADDITION OF D206-642-521/-522/-
561 CONFIGURATIONS.

ITEM	Qty -521	Qty -522	Qty -561	Part Number	Description
	X			D206-642-521	FLOAT SKIDTUBE INSTALLATION, LH
		X		D206-642-522	FLOAT SKIDTUBE INSTALLATION, RH
	1	1	X	D206-642-561 561-4	FLOAT SKIDTUBE
	1	1		D206-648-013	GROUND HANDLING KIT
1			1	D3274-045	SKIDTUBE ASSEMBLY
3			1	D2646	* AFT CAP (1)
4			2	AN3C4A	* BOLT (1)
5A			2	NAS1149C0332R	* WASHER (1)
5B			2	D3672-1	* WASHER (1)
20A			9	D3537-9	* WEARPAD (1)
21A			1	D3537-11	* WEARPAD (1)
26A			40	AN3C4A	* BOLT (1)
26B			40	NAS1149C0332R	* WASHER (1)
26C			40	ALS7-1032-130	* INSERT (1)
34			1	MS27039C4-06	* SCREW (1)
35			1	NAS1149C0463	* WASHER (1)
6	1			D2932-1	SADDLE, FWD OUT, LH
6		1		D2932-2	SADDLE, FWD OUT, RH
7	1			D2933-1	SADDLE, FWD IN, LH
7		1		D2933-2	SADDLE, FWD IN, RH
8	1			D2938-1	SADDLE, AFT OUT, LH
8		1		D2938-2	SADDLE, AFT OUT, RH
9	1			D2939-1	SADDLE, AFT IN, LH
9		1		D2939-2	SADDLE, AFT IN, RH

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JAN 10 2017

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APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ADD -521/-522/-561 SKIDTUBES NTS	
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ITEM	Qty -521	Qty -522	Qty -561	Part Number	Description
	X			D206-642-521	FLOAT SKIDTUBE INSTALLATION, LH
		X		D206-642-522	FLOAT SKIDTUBE INSTALLATION, RH
			X	D206-642-561	FLOAT SKIDTUBE
10	8	8		AN3C41A	BOLT
11	16	16		D2652	BUSHING
12A	8	8		MS21043-3	NUT
12B	16	16		D3672-7	WASHER
13	4	4		AN5C11A (or AN5C12A)	* BOLT (2)
14	4	4		AN5C11A (or AN5C13A)	* BOLT (2)
15A	8	8		NAS1149C0532R	WASHER
15B	8	8		D3672-7	WASHER
16	12	12		AN4C6A	BOLT
17A	24	24		D3672-3	WASHER
17B	24	24		NAS1149C0432R	WASHER
18	12	12		MS21043-4	NUT
37	10	10		D2712	SET SCREW
38	2	2		D2934	SADDLE SPACER
39	2	2		D2935	SADDLE SPACER
50	9	9		AN3C36A	BOLT
51	3	3		AN3C35A	BOLT
52	24	24		NAS1149C0332R	WASHER
53	24	24		D3672-1	WASHER
54	12	12		MS21043-3	NUT
55	2	2		D3396-3	SPACER
56A	1	1		AN5C35A	BOLT
56B	1	1		AN5C15A	BOLT
60	2	2		AN5C32A	BOLT
61	2	2		AN5C34A	BOLT
62	4	4		MS21043-5	NUT

- NOTES: (1) DENOTES THAT PART IS INCLUDED WITH D3274-045 ASSEMBLY ABOVE
(2) CHOICE OF BOLT WILL DEPEND ON CROSSTUBE (SEE INSTALLATION PROCEDURE)

DESIGN	AK	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	AK		
CHECKED	AK	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9749	SHEET 2 OF 3
APPROVED	AK	TITLE	SCALE
DE APPR.	AK	ADD -521/-522/-561 SKIDTUBES	NTS
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INSTALLATION:

INSTALL D206-642-521/-522 SKIDTUBE INSTALLATIONS PER SECTION 3.3 OF IIN-D206-642 REV. Q.

WEIGHT AND BALANCE:

THE WEIGHT AND BALANCE TABLES IN SECTION 5.2.1/5.2.2 OF IIN-D206-642 REV. Q AND SECTION 3.10.2 OF ICA-D206-642 REV. 6 ARE AMENDED TO ADD D206-642-521/-522 CONFIGURATIONS AS SHOWN BELOW:

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D206-642-521 206L/L1/L3/L4 HIGH FLOAT, LH	36.4 lb 16.5 kg	104.1 in 2.64 m	3789 in lb 43.6 m kg	-43.0 in -1.09 m	-1565 in lb -18.0 m kg
D206-642-522 206L/L1/L3/L4 HIGH FLOAT, RH	36.4 lb 16.5 kg	104.1 in 2.64 m	3789 in lb 43.6 m kg	43.0 in 1.09 m	1565 in lb 18.0 m kg
D206-642-521 407 HIGH FLOAT, LH	36.4 lb 16.5 kg	104.1 in 2.64 m	3789 in lb 43.6 m kg	-47.0 in -1.19 m	-1711 in lb -19.6 m kg
D206-642-522 407 HIGH FLOAT, RH	36.4 lb 16.5 kg	104.1 in 2.64 m	3789 in lb 43.6 m kg	47.0 in 1.19 m	1711 in lb 19.6 m kg

MAINTENANCE:

THE NEW D206-642-521/-522/-561 FLOAT SKIDTUBES SHOULD BE MAINTAINED PER ICA-D206-642 REV. 6, OR LATER APPROVED REVISION.

DESIGN	AK	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	AK		
CHECKED	AK	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9749	SHEET 3 OF 3
APPROVED	AK	TITLE	SCALE
DE APPR.	AK	ADD -521/-522/-561 SKIDTUBES	NTS
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